

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method of switching fabric port mapping for a switching fabric, the method comprising:

associating line ingress queues with logical fabric ports;

broadcasting fabric specific broadcast control cells to all ports on all shelves attached to the switching fabric, ~~wherein~~ the broadcast control cells containing the current logical to physical port mappings, based on which packets in the line ingress queues are to be forwarded by the switching fabric,

wherein the broadcast control cells are transmitted via the switching fabric.

2. (Currently Amended) The method of claim 1 further comprising;

storing the logical to physical port mappings in a plurality of traffic management circuits, each of the traffic management circuits providing an interface between the switching fabric and a line card~~wherein the logical to physical port mappings include the mappings of the ports on the shelf which initiated the broadcasting.~~

3. (Original) The method of claim 1, wherein the presence of a line card on a given fabric logical port is propagated to all other line cards in the system.

4. (Previously Presented) The method of claim 1, wherein tables of the logical to physical port mappings are updated by a fabric control cell mechanism.

5. (Previously Presented) The method of claim 4, wherein the fabric control cell mechanism immediately broadcasts a change in the logical to physical port mappings upon the failure of an active line card.

6. (Previously Presented) The method of claim 5, wherein the fabric control cell mechanism periodically broadcasts the current logical to physical port mappings.

7. (Original) The method of claim 6, wherein there are instances of multiple fabric control cell broadcasts ongoing.

8. (Original) The method of claim 7, wherein the broadcasts are controlled by shelf managers.
9. (Previously Presented) The method of claim 8, wherein the shelf managers periodically send out the broadcast control cells for all line card slots.
10. (Currently Amended) The method of claim 6, wherein the periodic broadcasts are made even when there is no line card in a given line card slot.
11. (Currently Amended) A switching fabric port mapping apparatus for a switching fabric, the apparatus comprising:
means for associating line ingress queues to logical fabric ports; and
means for broadcasting logical to physical port mappings to all ports and all shelves attached to the switching fabric,
wherein based on which packets in the line ingress queues are to be forwarded by the switching fabric, and
wherein the broadcasting is via the switching fabric.
12. (Currently Amended) The apparatus of claim 11, wherein each of the line ingress queues ~~an output queue~~ is associated with a logical destination port.
13. (Original) The apparatus of claim 11, wherein the logical fabric ports are globally managed.
14. (Currently Amended) The apparatus of claim 11 further comprising;
means for storing the logical to physical port mappings, each means for storing providing an interface between the switching fabric and a line card ~~wherein the broadcasting is made to all ports on all shelves attached to the switching fabric and the logical to physical port mappings include the mappings of the ports on the shelf which initiated the broadcasting.~~
15. (Currently Amended) A switching fabric port mapping apparatus for a switching fabric, the apparatus comprising:
circuitry to associate line ingress queues to logical fabric ports; and
circuitry to broadcast logical to physical port mappings to all ports and all shelves

attached to the switching fabric,

wherein based on which packets in the line ingress queues are to be forwarded by the switching fabric, and

wherein the broadcast is via the switching fabric.

16. (Previously Presented) The apparatus of claim 15, wherein the logical fabric ports are globally managed.

17. (Currently Amended) The apparatus of claim 15 further comprising:

a plurality of traffic management circuits, each storing the logical to physical port mappings and providing an interface between the switching fabric and one of the source line cards and the destination line cards, ~~wherein the broadcast is made to all ports on all shelves attached to the switching fabric and the logical to physical port mappings include the mappings of the ports on the shelf which initiated the broadcast.~~

18. (Original) The apparatus of claim 15, wherein there are instances of multiple control cell broadcasts ongoing.

19. (Currently Amended) A ~~machine-readable~~ medium readable by a computing device, ~~that provides the medium storing instructions, which when executed by a machine the computing device causes the computing device machine to perform operations comprising:~~

associating line ingress queues to logical fabric ports; and

broadcasting logical to physical port mappings to all ports and all shelves attached to the switching fabric,

wherein based on which packets in the line ingress queues are forwarded, and

wherein the broadcasting is via the switching fabric.

20. (Currently Amended) A switching fabric port mapping system comprising:

a multi-shelf switching fabric;

source line cards, each associated with a plurality of line ingress queues;

destination line cards; and

a broadcast control mechanism which updates logical to physical port mappings to all ports and all shelves attached to the switching fabric;

wherein packets in the line ingress queues are to be forwarded by the switching fabric based on the updated logical to physical mappings, and
wherein the updates of the logical to physical port mappings are transmitted via the switching fabric.

21. (Currently Amended) The system of claim 20, further comprising a ~~distributed broadcast mechanism to redirect traffic~~plurality of traffic management circuits, each storing the logical to physical port mappings and providing an interface between the switching fabric and one of the source line cards and the destination line cards.

22. (Previously Presented) The system of claim 20, wherein the mappings are executed in a multi-shelf switching environment.

23. (Original) The system of claim 20, wherein mapping tables are updated by a fabric control cell mechanism.

24. (Currently Amended) A method of switching fabric port mapping for a switching fabric, the method comprising:

broadcasting fabric specific broadcast control cells;

transmitting the broadcast control cells to ~~each~~all ports on ~~each of the~~all shelves attached to the switching fabric;

terminating the broadcast control cells with a ~~shelf processor~~traffic management circuits, each of the traffic management circuits associated with a line card;

updating a port mapping table stored on each ~~shelf~~of the traffic management circuits; and

mapping ingress queues to logical fabric ports instead of -physical fabric ports based on updated port mapping tables;

wherein a shelf's logical to physical ~~fabric~~ port mapping is managed locally and ~~it's~~the shelf's port mapping table updates are managed globally, and

wherein the broadcast control cells are transmitted via the switching fabric.

25. (Currently Amended) The method of claim 24, wherein ~~the terminating is done by a processor located in a line card~~ the traffic management circuit associated with the line card is an interface between the line card and the switching fabric.

26. (Original) The method of claim 24, wherein a fabric control mechanism supports either 1 for 1 sparing or 1 for N sparing.

27. (Currently Amended) The ~~machine-readable~~ medium of claim 19 wherein the instructions cause the ~~machine~~ computing device to store the logical to physical port mappings in a plurality of traffic management circuits, each of the traffic management circuits providing an interface between the switching fabric and a line card ~~broadcast to all ports on all shelves attached to the switching fabric, and wherein the broadcast logical to physical port mappings include the mappings of the ports on the shelf which initiated the broadcasting.~~